ENVIRONMENTAL QUALITY

CHAPTER 20

MAJOR FACILITY SITING

Sub-Chapter 13

Application Requirements--Evaluation of Alternatives

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17.20.1301 GENERATION AND CONVERSION FACILITIES, EVALUATION OF ALTERNATIVES (1) An application must contain an evaluation of the nature and economics of alternatives to the proposed facility, including alternative energy technologies that could be implemented at the proposed site, the no action alternative, and alternative technological components and pollution control systems for the proposed facility. An application must contain a comparison of alternatives leading to selection of the proposed facility as the preferred alternative, and an explanation of the reasons for selection of the proposed facility. Alternative energy technologies include, but are not limited to, alternative combustion technologies, alternative coal conversion technologies, alternative boiler designs, cogeneration and alternative uses of waste heat, alternative wind, hydropower, and geothermal generation technologies, and the direct application of energy resources.

(2) An application must contain an evaluation of the no action alternative, wherein no action would be taken to meet the purpose or provide the benefits the proposed facility is designed to meet or provide.

(3) An application must contain an evaluation of alternative technological components and subsystems that could be employed by the proposed facility that could substantially reduce the cost or environmental impacts of the proposed facility including, but not limited to, air and water pollution control systems, cooling systems, and transmission and distribution systems and those required by ARM 17.20.1418(10) and department Circular MFSA-1, Sections 3.11 and 3.12. (History: 75-20-105, MCA; IMP, 75-20-211, MCA; NEW, 1984 MAR p. 1844, Eff. 12/28/84; TRANS, from DNRC, 1996 MAR p. 2863; AMD, 2001 MAR p. 2410, Eff. 12/7/01; AMD, 2005 MAR p. 252, Eff. 2/11/05.)

17.20.1302 GENERATION AND CONVERSION FACILITIES, CRITERIA FOR EVALUATION OF ALTERNATIVES TO THE PROPOSED FACILITY (1) An application must contain an evaluation of relevant alternatives listed in ARM 17.20.1301, leading to a ranking of alternatives and selection of the proposed facility. The evaluation and selection may be made by any method preferred by the applicant.

(2) An application must include a detailed description of the methods and criteria used by the applicant to select the proposed facility given the capacity, availability, and types of alternatives, and to determine the proper size and timing of construction, in order to achieve maximum economies of scale and the applicant's desired level of reliability at the lowest economic cost. Documentation for process tradeoff studies performed by the applicant must be provided. Published tradeoff studies may be cited by reference. A description of the methods used to select the proposed designs for major process areas must be included.

(3) In addition to the applicant's criteria for comparison, all appropriate alternatives which have no insurmountable environmental, technical or other problems serious enough to warrant elimination from further consideration, must be ranked by the levelized delivered cost of energy, including known mitigation costs. Alternatives whose levelized delivered cost of energy is not more than 35% higher than the cost of energy from the proposed facility, or which have significant environmental advantages over the proposed facility, must be compared on the basis of performance, system impact, and environmental impact as follows:

(a) performance criteria include:

(i) the first year and levelized delivered cost of energy, including known mitigation costs, incremental transmission costs and the effect of line losses; and

(ii) the estimated on-line life of the alternative and the projected capacity factor during the on-line life of the alternative.

(b) environmental impact criteria include:

(i) significant environmental advantages and disadvantages; and

(ii) significant siting constraints.

(4) In comparing the no action alternative with the other alternatives, the costs of no action shall include, if relevant, the net losses to consumers who would be deprived of the output of the facility and would have to obtain the energy or product of the facility from other sources.

(5) An explanation must be given of the reasons for dropping any alternative from further consideration at any stage in the evaluation process. (History: 75-20-105, MCA; IMP, 75-20-211, MCA; NEW, 1984 MAR p. 1844, Eff. 12/28/84; TRANS, from DNRC, 1996 MAR p. 2863; AMD, 2001 MAR p. 2410, Eff. 12/7/01; AMD, 2005 MAR p. 252, Eff. 2/11/05.)

17.20.1303 SERVICE AREA UTILITIES, GENERATION AND CONVERSION FACILITIES, EVALUATION OF ALTERNATIVE LOAD-RESOURCE BALANCES IS REPEALED (History: 75-20-105, MCA; IMP, 75-20-211, 75-20-503, MCA; NEW, 1984 MAR p. 1844, Eff. 12/28/84; TRANS, from DNRC, 1996 MAR p. 2863; REP, 2001 MAR p. 2410, Eff. 12/7/01.)

17.20.1304 ELECTRIC TRANSMISSION LINES, EVALUATION OF ALTERNATIVES (1) An application must contain an evaluation of the nature and economics of relevant alternatives to the proposed facility, which could in whole or in part address the problem or opportunity as described in ARM 17.20.920 that the proposed facility is designed to address, including transmission alternatives, alternative energy resources, alternative transmission technologies, alternative levels of reliability and nonconstruction alternatives. The no action alternative must be evaluated. The evaluation must also include a comparison of alternatives leading to the selection of a preferred alternative and an explanation of the reasons for the selection of the proposed facility.

(2) An application for an electric transmission line must include an evaluation of transmission alternatives, including alternative end points and intermediate substation locations for the transmission line and upgrading or replacing an existing facility that would serve to provide the needed reinforcement that would be provided by the proposed facility. An application must also evaluate alternative timing of other electric transmission lines planned by the applicant, which in whole or in part would address the problem situation or opportunity or provide the needed reinforcement that would be provided by the proposed facility. For each transmission alternative, a minimum of three load flow studies must be provided, as required by ARM 17.20.922.

(3) Alternative energy resources and energy conservation alternatives are those that can individually or in combination offset or postpone the need for the proposed facility, or provide services comparable to the proposed facility. The evaluation must include a description of each alternative energy resource or energy conservation measure, the location and quantity available, any constraints to its availability and predictable daily and seasonal variations in the availability of the energy resource, if applicable.

(4) Alternative transmission technologies are those capable of providing comparable services or addressing the problem or opportunity the proposed facility is designed to address.

(5) An application based on reliability of service considerations must contain an evaluation of alternative levels of transmission reliability, and of the provision of backup generation to customers with articular needs for reliability.

(6) Nonconstruction alternatives include the use of curtailable and interruptible load contracts with customers and load management.

(7) The no action alternative means no facility would be constructed to meet the need or provide the services the proposed facility is designed to meet or provide. (History: 75-20-105, MCA; IMP, 75-20-211, MCA; NEW, 1984 MAR p. 1844, Eff. 12/28/84; TRANS, from DNRC, 1996 MAR p. 2863; AMD, 2005 MAR p. 252, Eff. 2/11/05.)

17.20.1305 ELECTRIC TRANSMISSION LINES, CRITERIA FOR EVALUATION OF ALTERNATIVES (1) An application must contain the applicant's evaluation of all relevant alternatives listed in ARM 17.20.1304 leading to a ranking and selection of alternatives and selection of the proposed transmission facility.

(a) An application must include a detailed description of the methods and criteria used by the applicant to select a facility which best addresses the problem or opportunity situations identified as the basis of need (see ARM 17.20.920) given consideration of economics, engineering, and environmental concerns.

(2) In addition to the applicant's criteria for comparison, an application must include a ranking of all relevant alternatives which have no insurmountable environmental, technical or other problems serious enough to warrant elimination from further consideration, by levelized annual cost, including known mitigation costs. Alternatives whose levelized annual cost is not more than 35% higher than the proposed facility or 25% higher when the proposed facility is a transmission line 230 kV or higher and at least 30 miles long, or which have significant environmental advantages over the proposed facility, must then be compared based on performance, system impact, and environmental impact as follows:

(a) performance criteria include:

(i) total construction cost and levelized annual cost;

(ii) reliability;

(iii) duration of the solution; length of time before additional reinforcement is needed; and

(iv) constraints to implementation.

(b) system impact criteria include:

(i) for generation alternatives, the need for future expansion of the existing transmission and distribution system;

(ii) total transmission system losses;

(iii) effect, if any, on timing and need for constructing new generating facilities; and

(iv) effect on the ability of the applicant to take advantage of opportunities for economy transactions.

(c) environmental impact criteria include:

(i) significant environmental advantages and disadvantages; and

(ii) significant siting constraints.

(3) In comparing the no action alternative with other alternatives, the costs of no action shall include, if relevant, the net losses to consumers who would be deprived of the services of the facility.

(4) A full explanation must be given of the reasons for dropping any alternative from further consideration at any stage in the evaluation process. (History: 75-20-105, MCA; IMP, 75-20-211, MCA; NEW, 1984 MAR p. 1844, Eff. 12/28/84; TRANS, from DNRC, 1996 MAR p. 2863; AMD, 2005 MAR p. 252, Eff. 2/11/05.)

Rules 17.20.1306 through 17.20.1308 reserved

17.20.1309 COMPETITIVE UTILITIES AND NONUTILITIES, GENERATION AND CONVERSION FACILITIES, EVALUATION OF ALTERNATIVES IS REPEALED (History: 75-20-105, MCA; IMP, 75-20-211, 75-20-503, MCA; NEW, 1984 MAR p. 1844, Eff. 12/28/84; TRANS, from DNRC, 1996 MAR p. 2863; REP, 2001 MAR p. 2410, Eff. 12/7/01.)

17.20.1310 COMPETITIVE UTILITIES AND NONUTILITIES, GENERATION AND CONVERSION FACILITIES, CRITERIA FOR EVALUATION OF ALTERNATIVES TO THE PROPOSED FACILITY IS REPEALED (History: 75-20-105, MCA; IMP, 75-20-211, 75-20-503, MCA; NEW, 1984 MAR p. 1844, Eff. 12/28/84; TRANS, from DNRC, 1996 MAR p. 2863; REP, 2001 MAR p. 2410, Eff. 12/7/01.)

17.20.1311 PIPELINE FACILITIES, EVALUATION OF ALTERNATIVES (1) An application for a pipeline facility must contain an evaluation of alternatives including, but not limited to, the use of alternative transportation modes, alternative starting points or destination points, alternative diameter pipe, alternative flow rates, alternative rates of pumping or compressing, alternative size, number and location of pump or compressor stations, alternative pump or compressor fuels and fuel sources, alternative pipe wall thickness and alternative pipe material, and the no action alternative. Service area utilities shall also evaluate alternate methods of meeting the need for the energy being transported. (History: 75-20-105, MCA; IMP, 75-20-211, MCA; NEW, 1984 MAR p. 1844, Eff. 12/28/84; TRANS, from DNRC, 1996 MAR p. 2863; AMD, 2001 MAR p. 2410, Eff. 12/7/01; AMD, 2005 MAR p. 252, Eff. 2/11/05.)

NEXT PAGE IS 17-1241